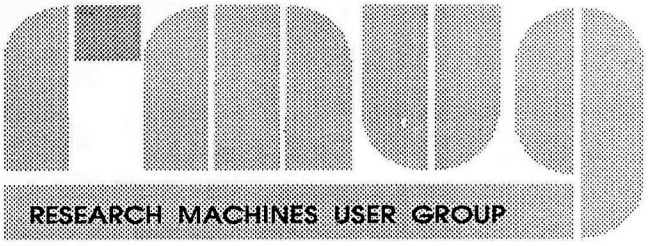
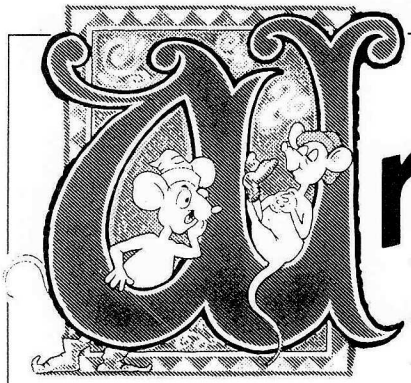
RM User

Volume 8:2
July 1993



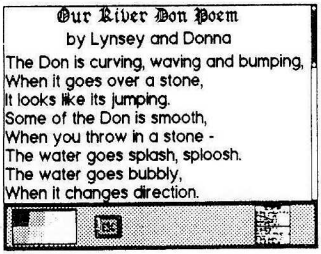


rite On!

The word processor that grows up with your pupils.

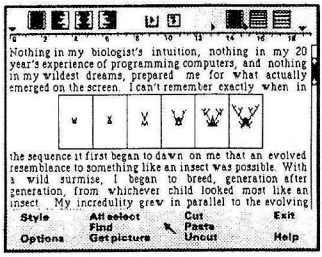
A revolutionary new word processor from SPA – in full colour! Choose exactly how you want *WriteOn* to appear. Beginners can use a very simple screen; more confident pupils can have access to *WriteOn's* advanced features step by step. And pupils can include PaintSpa or NewSPAper pictures into their documents.

For the beginner . . .


Our River Don Poem
by Lynsey and Donna
The Don is curving, waving and bumping,
When it goes over a stone,
It looks like its jumping.
Some of the Don is smooth,
When you throw in a stone -
The water goes splash, sploosh.
The water goes bubbly,
When it changes direction.

- Full *WYSIWYG* word processing
- Simple, uncluttered screen
- Choice of easy-to-read typefaces
- Type in colour or black and white
- Print out with a single key combination

For more advanced users . . .


Nothing in my biologist's intuition, nothing in my 20 year's experience of programming computers, and nothing in my wildest dreams, prepared me for what actually emerged on the screen. I can't remember exactly when in
the sequence it first began to dawn on me that an evolved resemblance to something like an insect was possible. With a wild surmise, I began to breed, generation after generation, from whichever child looked most like an insect. My incredulity grew in parallel to the evolving
Style
Options
All select
Find
Get picture
Cut
Paste
Uncut
Exit
Help

- Variable margins and tab stops
- Formatting ruler display
- Include page breaks and footers
- Easy-to-use foreign accents
- Short cuts with function or CTRL keys

Nimbus or IBM £39 + VAT Nimbus network or IBM site licence £109 + VAT

(IBM requires colour EGA graphics)

SPA

PO BOX 59, Tewkesbury,
Gloucestershire GL20 6AB
Telephone (0684) 81700 FAX (0684) 81718

HelpLine

The User Group exists to help its members use the computers which they have.

Many of you (about 20%) are home users of Nimbus computers and we would like to help you. Mary Mabey is a home user who has kindly agreed to let us publish her phone number; you may call her at home on 081 698 7573 if you want some advice on using your computer.

You may find that you have a problem which you feel is too trivial for Customer Support or you may have a problem with which they can't help, perhaps because you have a non-standard setup for your equipment or you are using third-party equipment. This is the time when we may be able to help.

Remember that you can telephone the User Group members in the evening or at weekends when RM is shut (and, of course, you are bound to hit just problems). Also, RM don't claim to have great knowledge of products which they don't produce such as Excel or PageMaker. They can tell you how to install the packages on their equipment and how to get started but they cannot be expected to give you in depth support on using the packages. We, on the other hand, can. Most of the people whose phone numbers are listed at the back are using the contents of the educational software library on a daily basis. We may have met exactly the problem you have just encountered.

If you are in difficulty, please feel free to ring anybody on the Committee (numbers at the back) and you may also phone Tim Phillips on 0284 706623 (home number).

It is a great help if you are having a problem doing something using your computer if you can be next to it

© RM User Group 1993

Contents

Help Line 3
News and Editorial 5
Enquire within upon everything - Microsoft Encarta 10
Technical Tips 14
Working with Excel 18
SPA news 22
DOS 6 - How does it affect you 24
Modems and Communications 27
The Anglo-Saxons 31
Hints and Tips 34
Shop Talk 37
Improving your image? 38
Humour? 40
Your Magazine 41
Membership Form 42
Committee Members 43

Advertisers

SPA 2
Micro Mart 20
Micro Mart 21
RM User Group Training Weekend 33
MSM 44

Deadlines for the next issues

RM User 8:3 ..... 10 September 1993
RM User 8:4 ..... 12 November 1993
RM User 8:5 ..... 14 January 1994
RM User 8:6 ..... 4 March 1994

The date shown above is the ***latest*** date for copy for the magazine. You will normally receive the magazine about 2-3 weeks after the date shown.

 © RM User Group 1993

News and Editorial

Research Machines' new catalogue has just arrived; it contains some new products but mainly provides a more comprehensive list of products available for schools (there is a separate catalogue for Higher and Further Education) There are no major price changes in this edition, but there are some small reductions. This is could be disappointing given the downward trend which we are used to but it's worth remembering that companies like Elonex have all increased prices in the period since "Black Wednesday" last September and are only just starting to reduce them again. RM have held their prices, or reduced them, for the whole of this period. The catalogue includes a number of new printers at reasonable prices together with a good description of why should choose a particular printer based on volume of use, quality required and the cost you can afford, not just for the original printer but also for consumables. This last point is important, especially for colour printing. A printer like the Mitsubishi G370-10 costs £1799 (£500 more than the DeskJet 1200C) which might be affordable but prints from it cost about 50p each, irrespective of colour content because it uses a complete "sheet" of wax for each page whereas the DeskJet cost varies depending on how much ink is used but is only likely to get to 50p per page for a full page of colour. The DeskJet is also slower which means that you can't print as many pages in a day! (Note that the Mitsubishi is not suitable for network use as it needs Windows 3.1)

One thing that you won't find in the School catalogue is RM's new computer; the V-Series. This is a very highly specified machine; minimum of 33 MHz 486DX with 8Mb of memory and a 170Mb hard drive. It has VESA local bus graphics as standard offering a speed of about 30 million Winmarks (compared to about 3 million for something like an S-Series machine) It has a spare local bus slot for use with a disc controller, for example. The computer is really aimed at the CAD market (in which RM have a 34% share, gained in just 5 years).

I was invited to visit RM at Milton at the beginning of June and I spent a fascinating day there finding out more of what they are doing. You will know that RM underwent a major re-organisation last October. It was a pretty traumatic time for most people but it has apparently been well worthwhile. The company has now been trading in its new form for over 6 months and is in an excellent position financially. Amongst other changes made last year was an increase in the number of staff involved in support and a change in the way sales works. The support improvements now mean that the average wait is less than 20 seconds and you will rarely wait more than a minute or so to have your phone call answered. The person who speaks to you will have all your details on a screen in front of them, including a description of the equipment which you have and any problems which you may have had in the past. (The only thing I now want them to add to this is the correct name for my school; I suppose I can't

© RM User Group 1993

have everything!) The sales department has access to the same database and so even if you can't get through to your normal sales contact it's possible for anyone else to find out about you and offer sensible advice. One of the small things which I noticed was that all the staff had RM computers on their desk; the last time I visited RM (actually I visited RML it's so long ago) I think they were using terminals to a mini-computer. Now an RM network is sufficiently powerful to handle most of their work (they still have a mini-computer for some things but this is simply accessed via the standard PC).

I had a chance to look at the manufacturing section. There's not much to see in a modern computer factory but RM's commitment to quality was very much in evidence. One of the first things attached to each machine as it is built is its serial number and this allows the records of its testing to follow it through the system. The machine starts as just the main board with a few chips in it and this is tested by plugging it into the rest of the computer. As the process continues the bits which are plugged in become less and less and finally a complete computer emerges to be burnt in for 14 hours before packaging and despatch. Again it's an RM network which collects all the data and provides the information which is copied onto hard discs in new machines. I noticed two small points which help to make sure that RM machines work properly straight out of the box and should continue working for a long time. The 486 chip has a lot of pins and it's quite difficult to make sure that it fits properly into its socket. To get round this problem RM have designed a special jig which makes sure that the chip goes in straight. When you work with computers like this you need to make sure that you do not cause an electrostatic discharge. Each of the employees wears a wrist strap which is then connected to an earthing point; standard stuff, I know but the thing I noticed was the rota for testing the wrist straps to make sure that they are actually doing their job. RM now manufacture computers within five days of the order reaching production. This is really excellent and makes a change from the months which we have sometimes had to wait in the past (I don't think I've *ever* had a major order delivered on time before now).

Net LM is RM's most successful product ever. More than 15% of UK secondary schools are using it - more than 600 sites with over 1000 servers and 30,000+ stations. You probably know that there were some problems with it last autumn and I think that RM stopped shipping it for a short time but in spite of this sales have exceeded all expectations, reflecting the fact that it is an excellent product. In the last magazine I mentioned some of the advantages which Net LM has over the standard Lan Manager product from Microsoft. While I was at RM I was told that I'd missed some points so here's a more complete list of the additions which RM have made.

The whole of the boot service is written by RM. This has several advantages over the RPL service provided by Microsoft. Firstly, it works without complicated setting up for each individual station. Secondly it supports every machine RM have sold (well not the 480z but

 © RM User Group 1993

I've no doubt it could be done!) and it allows great flexibility so that each station can have different config.sys files etc. The boot ROMs are also specially developed by RM to work with the parallel booting which speeds things up.

The idea of logging on while running Windows was developed by RM; it ought not to be possible to do it because in order to run Windows you really need to be logged on to the server so RM have a "special" user which logs on and loads Windows and then moves out of the way to allow a normal user to log on.

Machine Transparent Software Loader (MTSL) is designed to overcome difficulties in using software by allowing the station environment to be configured before and after an application is loaded both in and out of Windows. It is also an RM product which, while not specifically a network product, does make many things easier and the loader script (which is similar to a large MTSL) is RM's way of getting the station to start with all the various printers and drives connected and Windows configured for the hardware.

A lot of work also went into making sure that the PC 186 would work with the network and that all the various network cards which RM have shipped would also be supported. Many sites have multiple cable networks so routing was important; NetBEUI does not support routing of network data so RM had to devise a way of making it work cleanly (and I think that this routing is still not offered by manufacturers such as ICL).

Finally, CD ROM networking has been made available. The Microsoft CD Extensions (MSCDEX) behave as a redirector. This is also the way in which a network sends requests from a station to a remote drive and getting the two to co-exist with Windows means some careful planning. RM have integraged the various bits of CD ROM and network use and cured many bugs which they found in code from various vendors.

There are still three features of Net LM which need some work. The first part which is not totally satisfactory is its documentation; there is new documentation coming to all existing users (I've seen part of it!) but I think that the best date to give for it would be the Spanish mañana!

E Mail is another product which has been rather a long time coming. You probably know that RM were having a product specially developed for them but unfortunately the company concerned simply did not provide a working system. RM will now ship Microsoft Mail to all sites who bought a network before 1 April 1993. I believe the delay is now due to Microsoft upgrading the product just before RM were due to ship it so they have had to completely test new version to make sure it works.

Last, but most definitely not least, is Windows 3.1. I understand that getting this out to users is now the highest priority. Beta testing is taking place round about now with a predicted date for delivery of September (and no, I didn't ask which year). I do know that it's necessary to make sure that something as fundamental to the system as a new version of Windows needs pretty

 © RM User Group 1993

thorough testing and that this takes a long time. I just wish the testing process had started rather a lot earlier.

On the subject of testing I also went to look at the room which is apparently called the asylum. This houses a network with more than 128 stations in rather a small space up near the roof and this is where RM try to make things fail. The idea is to find out what odd combination of events might cause a server to fail or a station to crash so that it can be prevented. By its very nature this takes a long time (if the server loses a packet every time the packet count goes past 224 then you have to wait a long time to check that you've fixed the fault) This is the sort of testing which is expensive to do (because there's a lot of equipment tied up with a lot of people for a long time) but it's just this kind of testing which makes RM products a better buy than something built in someone's garage.

For many years primary schools were thought of as the poor relations of secondary schools and rarely had the resources they deserved. Funding for primary schools is still not wonderful but RM have consistently made the point that a primary school should have a computer system at least as powerful as a secondary school. The latest such product is the Multi-Media Window Box. This is an S-Series machine with CD ROM drive, 170Mb hard drive, Sound Blaster card, headphones, speakers and microphone. The disc supplied as standard is Microsoft's Musical Instruments (which was reviewed in RM User 8:1). Software supplied as standard includes Kid Pix which is an absolutely brilliant art package which has a fantastic range of special effects both visual and audible. The Starter Kit costs £1429 and the full Window box costs £1629; this adds First Word for Windows, Excel Starting Grid and the database Clipboard. Clipboard is very easy to use, both for creating datafiles and subsequently interrogating them; it won't replace Access in the school office but it is far more useful than the Our Facts type program which is all many schools have used in the past.

Also new is Houses and Homes, described as a topic pack for use with Excel Starting Grid. It uses some very clever macros so that the screen you see looks nothing like a spreadsheet but more like a hypertext package with buttons and pictures. There are two parts to it, the Victorians and the Playhouse; I only had a chance to look at the Victorians. This allows pupils to assume the role of a Victorian housekeeper who has to keep the household within budget for a period of time. I can't do it justice in short description but it looked really good. It costs just £49 for a single copy or £199 for a site licence (you need either Excel 3 or 4 as well in order to use it).

Just Grandma and Me is a CD ROM included in the Infant pack together with Mixed-up Mother Goose and Syracuse English Games for £99. I didn't see the last two but I could have played with Grandma and Me all day. I suppose you could describe it as an interactive adventure in which little critter and his grandmother go to the beach but there is so much to it; in the first screen where they are just leaving the house there are so many things which can happen and to which you

© RM User Group 1993

can respond that I'm sure any child (and most adults!) would be enthralled.

You may have noticed that Acorn have been advertising trade-ins for any old computers (£50 for any old machine, working or not) when you buy a new Archimedes. This may have something to with the fact that there end of half year financial results are due at the end of June and they need to boost sales or it may simply be altruism! RM don't run such a scheme because they can sell enough machines without spurious deals but there's no harm in asking if you can have a £50 discount - they can only say "No"!

You've probably seen the Tesco scheme to put computers in schools. Unfortunately they have again chosen to support Acorn rather than the PC standard. You can, however, use the printer, discs and concept keyboard which are available under the scheme with the Nimbuses you have. If you think that schemes such as this should be more general (not just Acorn or just RM but any computer then write to RM and let them know; they can then use your "vote" to help persuade companies to be more sensible in the future. (Write to RM plc, School Sales Desk, FREEPOST, Abingdon, OX14 4BR)

I promised in my last issue to say how my network is going; the fact that this magazine has appeared on time should be a clue to the fact that it's working fine. One of the three servers has now been running for 7 weeks without being stopped and the other two have been running for 3 weeks (and have only been stopped 3 times before that). To put this in context John Williams has sent me this quote: "A recent study of US Fortune 1000 companies by Infonectis showed that the average corporate LAN failed as often as 23.6 times a year." Most of the software on the network behaves as I would expect; some of it's much faster than on Net 3 so basically I'm fairly happy. The only real problem I've got is with Corel Draw. This is not really designed for networks (unless you have it installed on a local hard drive) but unfortunately it's the program which are CDT department use most (and it's also used for making newspapers in English and doing work for Art and ...) I don't know whether this means I have to give up on the idea of a network for at least one of the computer rooms.

If you've never done any programming but feel you'd quite like to try then I really can recommend Microsoft's Visual Basic. It makes it incredibly easy to create elegant looking Windows programs. The on-line help is an excellent example of what all help should be like and the tutorial supplied should help anyone to get started. Highly recommended.

Fax modems and software are now becoming very reasonably priced. FaxNow from Iconographic offers network fax capability. For £495 you get a fax modem and a 5 user licence. It will work with Lan Manager networks and can send faxes across the network via Microsoft Mail (available with RM Net LM). For more details contact Edhitec on 0423 871027.

© RM User Group 1993

Enquire within upon everything: Microsoft Encarta.

Mary Mabey

It's definitely an incredible achievement. The first really user-friendly, fully multimedia encyclopaedia absolutely crammed with information on every subject plus Webster's dictionary, an atlas and adventure quiz.

The single-user price for education is a mere £149, so is there any need for you to read this review? The answer is, please read on as this product is 94% outstandingly good and 6% rather dreadful when regarded in the context of a British educational tool.

Encarta is based on the 29 volume American encyclopaedia by Funk and Wagnall but it appears more objective and less predominantly American in bias than other encyclopaedias. Good coverage is given of European events, internationally famous people and places. Researching child labour throws up parallel articles on both American and British treatment of the subject and suffrage offers a timescale map on the achievement of American female suffrage in addition to Mrs Pankhurst and company which is a valuable addition. This is due to the amazingly powerful search engine which fronts the encyclopaedia. You type a chosen term into the contents search box and the index scrolls immediately to match what you are typing. No problems here over mis-spelling as you can click directly onto the correctly spelt term and select the article. (A plus for schools with large numbers of ethnic minority pupils who find English spelling incomprehensible.) You can also input search phrases such as "Fire of London" or "longest river in the world" into the Find menu. It is most effective if you insert the sought topic in inverted commas and state a wholly distinctive request. To find the longest river in the world it is necessary to use "**is the longest river in the world**" to limit the search to an exact match. Using "longest river in the world" will bring up any articles in which these words appear as part of the text eg the "Amazon is one of the longest rivers in the world." You can also use the Research Wizard to talk you through search strategy. I found this rather slow and no more effective than my own efforts but it is very attractive and simple to use. It is ideal for the home user at whom it was originally aimed. It would be good to see this developed as a research tool for the education market with a simpler text to enable younger/less able pupils to search more effectively. (Perhaps there could be a hidden toggle to switch between two levels of difficulty?) The search can be limited to information in a specific format such as animation, sound, text or map. This is excellent, but I can imagine the pupils limiting all of their searches to "animation!" I would also like to see charts included as a specific search format as they are such useful research tools.

Once an article has been selected it is easy to swap into associated articles by "See also", highlighted words or via the "Outline" button. Illustrations can be set to appear simultaneously in a Window beside the relevant text. They can be enlarged to full screen and any animation or sound

 © RM User Group 1993

is accessed directly from the main text screen.

Other features include a bookmark and word processor facility in which to store notes. You can copy or print text , graphics, maps, pictures and even sound files via the Windows clipboard or directly to other Windows applications. There is a wealth of material on every subject area. Particularly memorable is the science section which includes excellent animation sequences on the Doppler effect, Greenhouse effect, Water Cycle, ... They are just too numerous to mention individually but are of a uniformly high standard. Pupils will gain a far greater insight into these topics through these sequences than from any well illustrated textbook or video. The clips can be replayed, stopped, slowed down etc. Most come with a voice-over which explains exactly what is happening - an ideal tool for homework. Of course the speech is delivered with American accents and I did feel rather unhappy at hearing an excerpt from *Now we are Six* "Wherever I am there's always Pooh and me...." delivered in a strongly American voice. Chaucer in *American* Middle English was more bearable! I should point out that animation is not restricted to science but includes all subject areas. There are clearly animated maps showing the development of the Second World War, the Napoleonic War, even how to dance the waltz/tango etc. This last is no doubt included to give the budding high-flier all the social graces from the comfort and privacy of his sitting room! If he coupled it with the basic spoken vocabulary provided for each of the major languages and immersed himself in the text of Encarta for an hour or so he could should be able to bluff his way to the top with little further effort or expense.

The enclosed atlas feature is far superior to World Atlas. It offers a fair selection of principal cities (even smaller ones such as Southampton and Carlisle) with immediate access to related articles and a "sights and sounds" option. A bonus would be charts of temperature and rainfall, not just general world maps of climate. It is also possible to locate material on individual places including Eton, Harrow, the University of Kracow... the information available is quite astounding. The Timeline is less successful as it only allows a small pop-up text window of information to be accessed directly from the screen. You can insert a date into the "Event finder" eg 1066 or select "Battle of Hastings" from the topic list but this still brings up the same small text window. Timeline places the event chronologically but for full details the best search method is the one using the Find menu as detailed above.

The biggest problem is the inclusion of Webster's Dictionary. This gives American spellings. Any pupil typing in "anaemic" will be sternly informed that this word is not in the dictionary whereas the child who types in "anemic" will be rewarded with the definition! Old chestnuts like "car", bring up the definition "cage of an elevator" and "handbag" is defined as "hand=bag, woman's purse." If you are still unsure about the dictionary, what about "pavement" which is defined as "pave+ment.. a paved cover ..... to

© *RM User Group 1993*

smooth or firm the surface." "Nice" is defined in the following order, "fastidious/precise/pleasing/respectable," showing the considerable American bias in the nuance of individual definitions. Such misleading information is totally unacceptable as a British classroom tool. Surely it would be possible to produce another version of Encarta which included a British dictionary instead? (The obvious solution at present is to run Encarta minus Webster. Just delete the Dic.exe file from your hard disk once the programme has been installed.)

Encarta was designed to cater for the US home market so includes several gimmicks to make it an enjoyable learning package. One is the Mindmaze quiz game which I find particularly nauseating in its present form. The basic concept is excellent. The player travels through rooms of a castle where different figures ask questions based on the encyclopaedia. There are 4 different levels of difficulty and the player is offered multiple-choice solutions. A correct answer affords the player the opportunity to consult the appropriate reference in the encyclopaedia. All very laudable, so why do I dislike it? It is presented in a sickening popularist fashion. The questions are introduced by odd creatures which sometimes cackle hideously or deliver homilies like; "Trust me. Knowledge is gained by study, wisdom by experience." An over-large bear observes "Can't find a thing about honey- farming in this book. So what do you want to know?" (NB. You can suppress the speech and music in the Options menu within Mindmaze but any pupil could easily discover how to re-select them) It is virtually impossible to get the answers wrong and correct answers are greeted with rounds of applause. Used in an open-learning situation in a school library this could be the latest addictive game! It appears impossible to delete the executable file for the game as it is embedded in the Encarta directory. Perhaps it could be separated in future editions? Better still, it would be good to have a more scholarly, less overtly popular, version of general knowledge questions for educational use. Perhaps a future development might allow teachers the opportunity to design a question sheet to support what they have just taught?

Despite reservations about the dictionary and game I am most impressed by this new title from Microsoft. It is by far the most comprehensive, user-friendly, encyclopaedia currently available on CD-ROM and the search retrieval software is remarkably powerful and simple to use. The indexing puts it head and shoulders above all of its competitors. At present there is no network version available but surely MS will see the value of marketing one.

Installation is simple, a straightforward setup from Windows file manager. It requires an MPC or 386 with *2MB RAM, MS Windows 3.1 or later, a sound card, headphones or speakers, VGA display (preferably 256 colours) and a mouse. It takes the current windows printer as the default but a setup menu is provided within Encarta.

**Although Microsoft claim that this will work with 2MB or RAM you should take this as an absolute minimum; in*

© RM User Group 1993

common with most Windows packages , the more memory you have, the better it will work. Ideally you need a computer that complies with the Multi-media PC specification (386SX or better, 2Mb of memory, audio board, VGA display capable of 256 colours) and Windows 3.1 You can also access just the text and graphics without the sound card but you still need Windows 3.1. Note that the install routine copies some files to a local hard disc; a minimum of 2.5Mb and about 8Mb for optimum performance. The use of Encarta is not currently supported on networks but pressure is being put on Microsoft to get this sorted out!

I was most impressed when I saw Encarta. It really does have a good user interface. It's the sort of thing which makes me want to read more and if it has the same effect on students then it has to be good for learning.

I've also recently looked at the Comptons Interactive Encyclopaedia. Compared to Encarta it has a rather poorer interface. The big "feature" is its virtual workspace. This gives you a spreadsheet like grid on which you put bits of work. Clicking on the appropriate cell quickly gets you back to the subject you were looking at. I'm sure its a good idea but I think it's too confusing. I know that when you start browsing through an encyclopaedia it's easy to get lost and forget what you were looking for in the first place but a decent history facility which simply lets you back track is surely enough. Comptons costs £245 but this price allows its use on a network (although I understand that there have been problems using it on RM Networks; they should be fixed by now) Contact Encyclopaedia Britannica International Ltd at Station Approach, Wallington, Surrey, SM6 0DA Tel: 081 669 4355 for more details

If you're looking for a ***big*** *CD ROM server then you might want to look at Attica's latest offering. This will allow up to 32 CD ROM drives to be used; up to 10 of them are in a single 486 based server. It runs Optinet so it should work happily with RM Networks. Attica will undertake a full site survey prior to submitting a quote. Contact Attica on 0865 791346 for more details.*

 © RM User Group 1993

Technical Tips

Stephen D. Sharrad.

Stacky Subject.

Stacker (from Stac Electronics) is a disc-compression utility, designed for use on the average PC. Version 3 is the latest; recommended where speed is a priority. The utilities for version 3 require a large amount of space on a hard disc but this is more than made up for by the compression ratio, which can be set from 2:1 to 4:1 by the user. The cluster size (minimum space a file takes up; see Tech Tips in RM User 7:2 page 11) can also be altered. Version 2 is similar, and works in much the same way.

The utility creates a "host drive" which is reasonably small. This, for example, is normally drive C. This drive is then "mounted" (opened up) creating the compressed drive, which is normally something like drive G. After the initial condense sequence, the above "mounting" is carried out every time on boot-up. The system files are not compressed, as they exist on the normal "host" drive, or drive C. Normally, Stacker will swap drive names so that the host-drive now becomes drive G and the condensed, usable drive now becomes the familiar drive C.

Okay, so what's the problem? What's the catch? Stacker will work on virtually any MS-DOS (V2 or higher) computer - except the PC186. Stacker will condense a PC186 drive (i.e. a 21MB drive is "stacked" up to 32MB) and you can even use the condensed drive. However, you cannot alter any files on the disc. On boot-up, stacker recognises that these files have changed and asks the user what to do - but as the machine is not in IBM mode (as it has just booted up) it locks up. So, Stacker is not a viable proposition on a PC186.

Smallpaper?

You may have tried creating you own desktop wall-paper for Windows 3. However, if you go into Paintbrush, create any screen, save it as a bit-map (BMP) file, as Windows Wallpapers are, and then use Control Panel to try and install the new wallpaper, an error is reported. The answer? Windows Wallpapers are not full-sized. So, unless you have a program which will allow you to set sizes, you will have to follow this procedure: Get hold of one of the supplied Microsoft wallpapers, and make a copy of it on your hard disc. For example:

```
COPY RIBBONS.BMP NEWONE.BMP
```

Then run Windows and Paintbrush. Load in the new file, and then using either filled-box or brush, you can wipe the old desktop. You can then draw whatever picture you like and install this using control panel as your wallpaper, providing that you have saved as a BMP (bit-map) file. One of the uses of this might be to use the desktop space to display a message to pupils using a computer to close down properly (and park the hard disc heads if using an older PC186).

Sound It Out

If you have a PC186, you may know that the very early PC186's (i.e. Serial prefixes 1-16 of the 84 key systems) were fitted with a unique "voice out" chip. Later machines

 © RM User Group 1993

(most 84 key systems and all 102 key systems) do not have this chip fitted to them, and there is a spare socket (IC 59) on the mainboard to accommodate it. Although there is little software around to make use of this 4-bit ADCPM sound chip, you may like to know that it is available from Manhattan Skyline Limited on Maidenhead (0628) 75851. The chip is an Oki MSM5205. One chip costs 1.30, but, as said, I do not think that there is any reasonable software for it. This is simply because no way exists for the speech to be put onto Nimbus directly; RM's Speech Output Program (VOX.EXE) simply plays recorded speech data files, which were originally gathered using a 480z!

Clean Out Of Paint

For those of using a PC186 and Windows 3.0, you may like to note a small problem with Paintbrush. Am I dreaming, but if you do a picture, and select <FILE>, <SAVE AS> and then <OPTIONS> and try and save the file as a PCX file, and then try and load the file back in again, (with the load in option set to PCX), the picture loaded in is certainly not your picture but is either blank or a mass of lines! Also, Paintbrush will not allow you to print from itself, saying to the effect that you do not have enough memory - even if you have a 1MB machine. If you want to print from Paintbrush, you will have to cut and paste into a different application like Windows Word and print from there.

Short Of Time

Another classic from RM: The Utility board for the PC186 has on it a real-time clock. On boot-up, the date/time is transferred to the operating system by use of the CLOCK.SYS file inserted into the CONFIG.SYS. Unfortunately, CLOCK.SYS transfers to the operating year-month-day-hour-minute, but forgets to transfer across SECONDS. So what's the big deal? As each time transferred to the operating system each time is rounded DOWN (even if, say, the time was 1 minute and 59 seconds it would be rounded down to 1 minute), and, as you may know, DOS keeps account of seconds and microseconds. Unfortunately, when CLOCK.SYS finishes, the time in the operating system (which is now something at 00 seconds) is stored back into the clock on the utility board, meaning, in effect, that the clock on the utility board, is put back. This means, that every time you boot-up, the real-time clock gets less accurate. With two months regular usage, a PC186 clock may lose upto 20 minutes in time!

(Editor's note: my network servers lose several minutes per day so the odd few seconds on a PC186 seems almost reasonable!)

Caught Speeding

The 8087 maths co-processor option for a PC186 is a little used (mainly because of the price) option. The 40-pin DIL chip is either mounted on a PC186 utility board or on a little intermediate board. Both boards fit onto the PC186 mainboard (CAUTION: Damage to the pins when fitting these devices can be caused easily. Also observe electrostatic discharge precautions by not wearing nylon clothing and make sure that you are earthed). The PC186 recognises the 8087 when it is fitted into the machine instantly and no EEPROM configuration changes

© RM User Group 1993

are required. Programs like WinWord 1.1 and Excel 2 will all use the 8087 to a great benefit.

Touchstone CHECKIT (see later), which rates a computers performance (as well as a series of diagnostic tests), rates a PC186, with 8087 fitted, with a maths speed of 6 times that of a 386SX 20 Mhz. (Maths functions include numeric functions, comparisons and trigonometric functions). Unfortunately, this is only maths functions and the PC186 is still very slow compared to a 386, but the difference in speed (with and without co-pro) with programs like Excel is more than noticeable. If you have a utility board and wish to fit an 8087, you may purchase them from several companies advertising in magazines. You can either fit the 8087/1, or the 8087/2, (10MHz and 8MHz speeds), but you cannot use the 8087/3 (5MHz version), as I have found to my cost.

Mouse House

I read with interest David Palmer's article in the last magazine, entitled "Talking Shop." The part concerning mice was very interesting. The LED and sensor do in fact read a gray code (a cyclic progressive binary code) back to the computer, allowing it to tell which direction the mouse is moving in. I believe he was talking about a Logitech mouse. However, of even more special interest are the old large mice supplied with early PC186's. These mice have steel balls and are much heavier. The interesting fact is that in these mice there is absolutely no electronics at all, unlike their Logitech counterparts. The mice also use a gray code but there is no interfacing electronics. This provides an ideal project to pupils: Get them to design and build a wind speed and direction indicator, displaying the direction on a compass-like screen. Wind speed can also be calculated and displayed on screen simultaneously. The project plugs straight into the mouse port. If anybody wants more details, then if they would like to write to me I can tell them more.

This also reminds me of a rather large discrepancy in the PC186's Owners Handbook. The page describing the mouse port of the PC186 is in fact quite incorrect:

Pin	Manual	Actual
1	Up	Select
2	Down	Left
3	Left	Right
4	Right	Up
5	5v	Down
6	Button 1	Button 1
7	Select	5v
8	Ground	Ground
9	Button 0	Button 0

Put it like this: The above is how my mouse works! The select pin is normally only used by joysticks.

Checkit Out

This month's software review is about Checkit, a program from Touchstone. I have tested version 3.0. Most of its functions work on a PC186 except for some of the system tests. Not that there is any real need for diagnostic software for a PC186 as there is very little to a PC186 which can go wrong, and which is not easily noticeable.

However, on a decent machine, Checkit is a great advantage. Checkit can be used to check a machines BIOS (Basic Input/Output System),

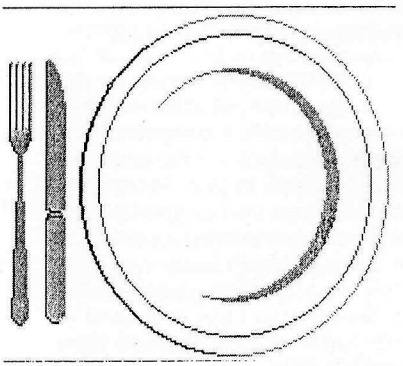
 © RM User Group 1993

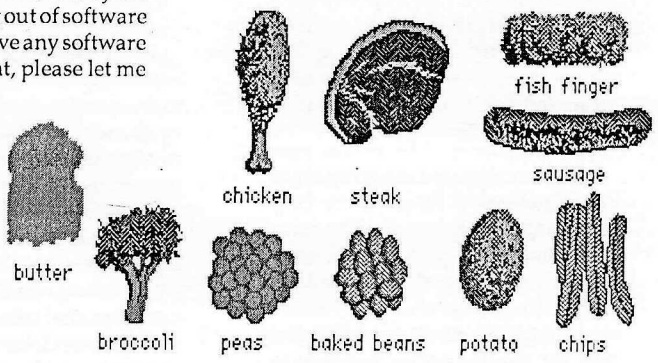
its CMOS memory (Complimentary Metal-Oxide Semiconductor), its hard discs, graphics cards, and RAM. This is useful. For instance, if your machine reports an error code on start-up, and you are unsure what it means, Checkit may tell you, for example, that the graphics card has failed (i.e. failed to switch modes). Checkit also provides a set of benchmark tests which rates a machines hard disc, system and graphics speeds. The system benchmark does not normally work on a PC186 unless you test the system board first. Checkit's user interface is a bit grotty, in that little user on-line help is provided and the user interface is a bit bland. Unfortunately I have no idea where Checkit can be obtained and for how much, for a product which is reasonably satisfactory.

That's it for the moment. Anybody who has any sort of computing problem may contact me help, at the address in the back. Also any comments or hints for Tech Tips would be greatly appreciated. By the way, I'm fast running out of software to review; so if you have any software which you don't want, please let me know!

Dinner:

Place setting and Food.





© RM User Group 1993

Working with Excel

Steve Rochford

Spreadsheets are supposed to be the reason that personal computers took off back in the late 1970s; VisiCalc for the Apple II was a massive seller and it's supposedly because of that the Apple became the success it is and lots of other companies, not least IBM, decided that computers for individuals were a "good idea".

Spreadsheets, however, are not exciting; if you let most children experiment with a computer Excel tends not to be the program which they load first. In part this must be because most uses of spreadsheets are based on accounting, a topic about which most pupils know very little. This article gives an example of one of the exercises I use with some of our pupils in a bid to make them more relevant (it may also be useful for staff at exam time!) I also use an exercise based on the football Premier League, one to show how graphs of various sorts are drawn in Excel and then a couple of financial ones; working out the cost of petrol for a car and costing the food needed for a weekend camp. If you would like any of these then please send a formatted disc to me; the files are in Word for Windows format.

In this exercise you are going to see how Excel could be used to help process some exam marks. The exam comprises two papers, the first marked out of 50 and the second out of 40. The second mark needs converting to a mark out of 50 and then the two are added together to give a percentage. You are then going to use Excel to sort the candidates into rank order, attach a grade based on their score and then find out how many people have achieved each grade.

Enter the following data in columns A to D

Name	P1 (50)	P2 (40)	%age
Ahsen	35	40	
Annette	16	24	
Augustinos	9	9	
Benjamin	40	24	
Bilal	30	40	
Eiman	15	33	
Faisal	45	23	
Geeta	35	23	
Jason	8	9	
Jonathan	23	13	
Julian	30	33	
Kolya	23	37	
Kunwar	12	25	
Nicholas	40	27	
Omar	23	19	
Priti	19	15	
Robert	40	26	
Roni	38	24	
Sharif	25	37	
Simon	23	35	

To calculate the percentage you need to add the number in column B to the number in column C divided by 40 and multiplied by 50. This total is then divided by 100 to give a percentage. Remember that you start a formula by pressing = and that brackets may be necessary to get the logic correct. Put the first total in cell D2 and then use Edit Fill Down to complete the column. Format the numbers in column D to show a percentage with no decimal places.

Save your work as EXAMS

© RM User Group 1993

Highlight all the data **but not the headings** and then choose Data Sort. Make sure that the First Key box has a highlight in it and then click in cell D1 (you can move the dialog box if it is in the way by clicking on its title bar and dragging it). Click on Descending and then OK. You should see the marks sorted with the top mark first. If you do not then **immediately** choose Edit Undo Sort and try again.

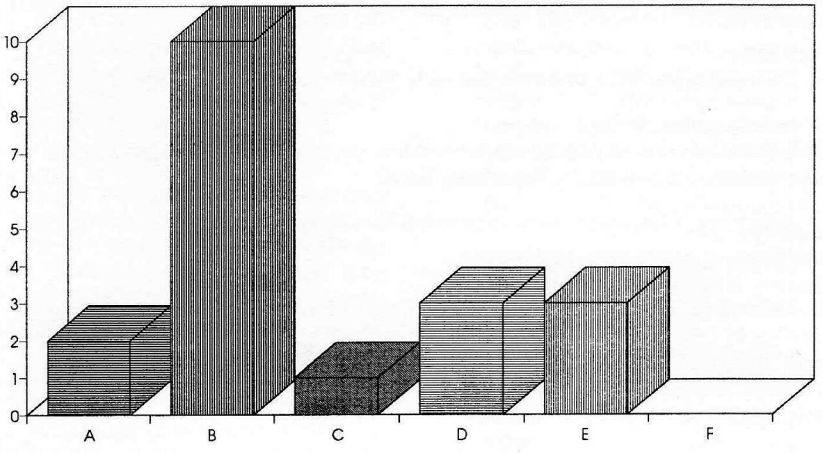
At the bottom of columns B to D enter a formula to show the average mark for each part of the exam and the total percentage; remember that the function is called Average and you put the set of numbers to be averaged inside brackets after the word average.

Put the word Grade as a heading at the top of column E and then enter the data on the left in cells G1 to H6.

0%	F
20%	E
40%	D
50%	C
60%	B
75%	A

Highlight this data, choose Formula Define Name from the menu and give the name Grades and then click OK. You have created a *lookup table*; you are now going to use it so that anyone scoring 0-19 gets grade F, 20-39 gets grade E and so on up to anyone scoring 75 or greater who gets a grade A.

Click in cell E2 and enter the formula: **=vlookup(D2,grades,2)**



 © RM User Group 1993

This tells Excel to take the number in cell D2 and look it up in the first column of the area called Grades. It should then find the value in column 2 of this area and give that as the result. Use Edit Fill Down to complete the column.

You are now going to count the number of each of the grades A to F. Highlight all the data from A1 to E21 and select Data Set Database from the menu. Fill in the following from G8 to L9

Grade Grade Grade Grade Grade

A B C D E

Click in cell G10 and type the formula:

=dcounta(database,5,G8:G9)

The number of grade As should appear. You have used a formula which looks at the area called database. It then goes to the fifth column and counts how many cells match the *criterion* in cells G8:G9 (ie have Grade equal to A). Use Edit Fill Right to replicate from G10 to L10.

Highlight the data from G9 to L10 and then click on the graph button. Drag a box out on the spreadsheet to the size which you want the graph to be. Double click on the chart to open it and then use the Gallery Menu for the graph to make it a 3D chart and use Chart Attach text to label it to make it clearer.

Close the chart window and then save the combined sheet and graph.

Micro Mart

Spring cleaning means the following must all go!

For Sale:

2 unused mono VGA monitors £50 each, 2 used mono VGA monitors £30 each

Free (except for carriage costs):

2 Complete sets of Net 3.1 documentation (both network management and applications such as Word, Superbase, Excel)

A number of Dataease manuals (version 2)

6 ITEM guides to Dataease

Maths, English and Science courseware from RM complete with discs - unused.

Contact Steve Rochford at Latymer Upper School, King Street, London W6 9LR Tel: 081 741 1851

 © RM User Group 1993

Micro Mart

For Sale:

7 PC186 with Z-net, floppy drive and colour monitor	£200 each
2 PC186-20 - as above but with 20Mb hard disc	£300 each
1 PC186 ex-server 40Mb external hard disc	£300
5 380z 56k HRG, dual drives; 1 with colour	Offers
1 480z network with 6 stations, 380z Server with 8" floppy drives and hard disc (will separate)	Offers
1 480z external quad density dual drive	Offers
1 Diablo printer & WordStar for 380z or 480z	Offers

Contact:

Hugh Williams, The Nottingham Trent University, Clifton, Nottingham, NG11 8NS Tel: 0602 418418 Ext 3253 or 3370

Wanted:

Any PC286 network machines with Z-Net or Ethernet interface

Please contact Mrs A Charlton, South Hampstead High School, 3 Maresfield Gardens, London NW3 5SS Tel: 071 435 2899

For Sale:

Offers invited for the following equipment: (RM Nimbus PC186 Peripherals)

- ✯ Cumana SCSI Interface
- ✯ Floppy Disk Controller
- ✯ Full-Height 3.5" dark grey drive
- ✯ Carrier for floppy drive(s)

Wanted:

- ✯ Any manuals or cheap software for PC186. Manuals like PC186 Advanced Programmers Reference and DOS Programmers Guide.
- ✯ Adaptec 4070 (or Zbec equivalent) SCSI to RLL adaptor. Used to allow RLL drives to be used on PC186 systems, e.g. Seagate 277R.
- ✯ Low-level format program(s) for the above controller adaptors.

Please contact Stephen Sharrad, 10 Gainsborough Hill, Henley-On-Thames, Oxon RG9 1ST or phone (0491) 577149.

© RM User Group 1993

News from SPA

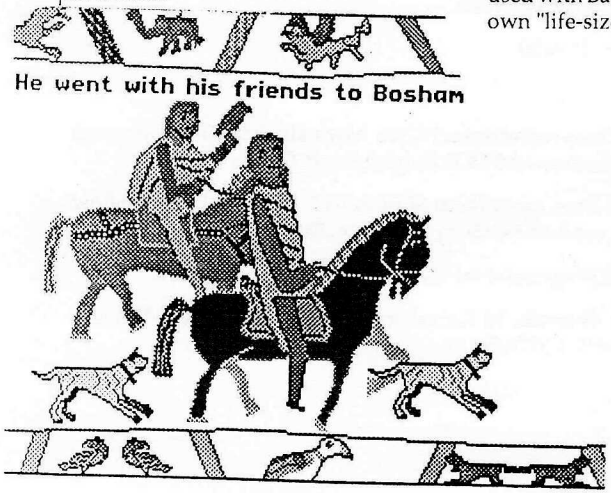
Software Production Associates have been making software for RM computers for pretty well as long as there have been RM computers; here's some news of their newest software.; more details should appear in the magazine soon. As ever, all this software will run on a PC186 as well as all other RM machines; they can even be used on single floppy PC186s so no-one need feel left out.

Banner Plus could be described as a program for making banners - but that really doesn't do it justice. Banner Plus lets you put text and pictures on a background which can be any length and up to the height of the paper you are going to use. By far the best feature of Banner Plus is the way it treats bitmaps (paintings done in, for example, PaintSPA) as objects which can be moved around on the background which can also be a bitmap. This allows enormous flexibility in the design because you can easily change your mind about the place of anything, no matter where you have put it or when you put it there.

The program comes with a selection of fonts and pictures but it goes well with PaintSPA and NewSPAper because the pictures and fonts are the same format.

Bayeux is described as "a pictorial database designed to be used to develop pupils' understanding of the events of 1066" It comes with a booklet which shows the whole of the Bayeux tapestry and a selection of pictures on disc which can be used to create your own version in PaintSPA. The pictures are designed to fit together well (so, for example, the rider will look as if he is riding the horse) and they have been drawn to allow the colours to be changed easily.

The package comes complete with a variety of ideas for using the picturebase and explains how the pictures can be incorporated into WriteOn documents. It also contains a history of the events leading up to the tapestry's creation and some pointers to who may have commissioned it. *Bayeux* can also be used with Banner Plus to create your own "life-size" tapestry.



© RM User Group 1993

archer3

sword1

Screen Saver has been around for sometime but now has a new version. It allows you to capture any Nimbus graphics screen and save it to disc for later use. This means that you can, for example, take pictures of a screen for use in a worksheet or you can use the pictures created in one program in BASIC or Logo (with suitable SPA extensions) The pictures saved are in the standard SPA format so they can, of course, be used in any of SPA's products. The latest version of Saver allows you to print out a group of screens or other SPA pictures, change the printout size, magnifying it up to 250% if you want and print speed is also dramatically increased.

PageLink allows you to produce branching format books. In these any page will give some information or part of a story and then offer the reader a choice of what to do next. Any page can have up to 4 links from it and can be linked to from any number of other pages. The top of each page contains either a picture (created in PaintSPA) or some text and the bottom lists the choices. Note that although there are only 4 choices each choice can branch randomly to one of 6 options, adding interest to a story (eg on one occasion the princess kissing the frog may turn it into a handsome prince, on another the frog may simply leap sensibly away!) It's possible for groups of children to work on producing a book and the software will check to make sure that you don't have any dead-end pages which you don't want and that you have no pages which cannot be reached.

Finally, if you're as poor as drawing as I am then you really need some pre-drawn pictures; Artwork disc 3 is now available and like the previous two contains a mixture of colour and black and white pictures. The pictures include a variety of borders, both vertical and horizontal, maps of Britain, Europe, America, Australia and India and a dinner place setting with food to go on the plate (or anywhere else, really!) The thing I like about the SPA artwork is that you could really imagine using it. CorelDraw! comes with thousands of pictures, many of which look very nice but you really don't need them; this disc, on the other hand, really could be used regularly.

As ever SPA prices are reasonable, especially if you are buying for network or multiple user use; the prices which follow show the price for a single user and then for a 16 user licence. Banner Plus: £34/£89, Bayeux: Screen Saver: £21/£54, Page Link costs £25/£69 and Artwork disc 3: £12/£29. Contact SPA for more details at PO Box 59, Tewkesbury, Gloucestershire GL20 6AB Tel: 0684 81700

sword2

© RM User Group 1993

DOS 6-How does it affect you?

Stephen D. Sharrad.

For some time to come DOS 5 will remain on RM Net LM - even the now standard Windows 3.1 has yet to appear on RM Net (due sometime this Autumn). Recently, as you may know, DOS 6 came out. Basically Microsoft haven't had to do much - just "bolt-on" utilities from other companies, like Central Point. But what is in it for you? Why should you pay more money (approximately £50) just to have the latest version?

Some of the new more exciting commands include a sophisticated virus protection suite, namely MEMWAV/MEMSAV (Windows/DOS versions) - a virus file scanner, and VSAFE, a memory-resident virus preventer rather than cure. Once installed in memory, VSAFE will alert you when programs try and install themselves in memory, or a host of other things (the user can select what program actions make VSAFE create an alert) like programs writing to the boot-sector of a disc). These programs are probably more beneficent to the network user; large drives or open access user "common" drives are vulnerable. However, DOS 6 also contains features that home users will appreciate, such as the new on-line HELP command. Just type HELP at the DOS prompt followed by the command you need guidance with and relevant information is displayed. HELP also gives you different types of help, not just comments but examples of syntax and error correcting.

Standalone users and those in charge of network servers will likely make use of the most recognised benefit of MSDOS 6. This is the double-space function. It can be slightly tedious and perhaps tricky setting up (it works in much the same way as SuperStor or Stacker - see the first part of the Technical Tips article in this magazine to find out more on how they work). DOS 6 also has more advantages for hard disc users. This includes impressive (and improved) UNDELETE and UNFORMAT commands. UNDELETE has different operating modes, such as Tracker, which keeps tabs on a deleted file so that it can be recovered instantly.

But what are the benefits to network users? To start with, VSAFE (the memory resident virus protector) cannot be used safely with Windows. For instance, a network manager puts the VSAFE command in the logon script on Net LM. The user then logs on, using the Windows graphical menu system. The user then shells to DOS. He then tries a few DOS functions, one of which re-loads the command interpreter, COMMAND.COM. The machine then locks up. Why? VSAFE appears to be incompatible with large memory-resident programs, like Windows. Therefore, VSAFE cannot be used on Net LM if the Windows logon is used. The other virus utilities, MEMSAV or MEMWAV, can be used successfully across a network, with or without Windows running. These utilities can also be used to check Network drives - a good thing for a network administrator who wishes to check a network for viruses but does not wish to shut the network down (although obviously some drop in

 © RM User Group 1993

network performance can be expected if one station is continually reading from the server).

The disc-compression utility may also cause further problems. As mentioned previously, RM Net LM will continue to be shipped with DOS 5 for a while. So, what happens if a user compresses their hard disc, but then logs onto Net LM and then tries to access their hard disc? As mentioned in the Technical Tip article, compression utilities create host and mounted drives. When compressing a hard disc. DOS 6 allows you to specify the size on the host drive, and you will have this amount of space available to you from network access. For example, if this space was set at 2Mb, you would have just under this amount free for you to use (some would, of course, be taken up by the system files on the hard disc). The rest of your hard disc would be unavailable. It would show on the host drive as a large zip-like file. If you save information to this drive, to access it back in standalone mode requires the user to change from drive C to that of the host-drive, drive G for example.

Disc-compression also can be a snare. If anything goes wrong, then problems rectifying the situation can occur. This is because some of the ordinary DOS commands like FORMAT, have been altered, to take account of compressed drives. So, what happens, if for some reason you alter your CONFIG.SYS. Then you attempt to boot-up, but because of an error in the CONFIG.SYS, the hard disc crashes. You cannot access your data. So, you obtain a floppy disc and boot-up. You can access you host-drive, but no more. You cannot format the drive again because the DOS 6 format command will tell you that the host-drive must be mounted before it can be formatted. You cannot mount the hard disc because you cannot boot-up from it. If you happen to have a functioning DOS 6 boot-disc with the double-space software on it (i.e. copies of the hard disc's original CONFIG.SYS and AUTOEXEC.BAT, and all the double-space SYS files) then you may be in with a slim chance (because if your hard disc's configuration has been changed then the system settings will have changed). Therefore I would recommend that users upgrading to DOS 6 keep the old version of DOS that they were using, as a fail-safe. Also keep a DOS 6 boot-disc with the above mentioned double-space installed on it, in case of emergencies.

It goes without saying that UNDELETE and UNFORMAT cannot be used by a user across a network drive, although the standalone benefits are obvious. The DOS 6 HELP command will also work effectively through network media. DOS 6 has not had a very tremendous release, but it does offer some new competition to the other operating systems like DR DOS. If you currently have DOS 5 and also the other utilities like Central Point Anti-Virus and the Norton Utilities and perhaps SuperStor, DOS 6 may be more of a waste of time. Especially if you are more of a Windows orientated follower. But if you don't have these very expensive commodities, then why not pay the smaller sum for DOS 6. You never know. It may come in use.

DOS 3.1 release 3.10C will be the newest version of DOS for the PC186. This is because of reasons beyond

© RM User Group 1993

RM's control. Windows 3.0 will also be the latest version of Windows for the PC186 (Real Mode only). This is because the 80186 chip does not support the virtual and protected mode (XMS memory) that the 80286 does.

It's worth adding a few comments about RM's DOS versions. DOS 3 for the PC186 is rather different from DOS 3 on a "clone" PC because the memory architecture is so different. If you read some of the claims made for memory managers that are now around you'll see they offer you as much as 630k of free memory at the DOS prompt; DOS 3 on a 186 can give you something like 900k free (and up to 703k even in IBM mode)

DOS 4 had various problems for the clone makers, not least because it was too big. Again, RM made moves to improve things. The XCLAIM and HILOAD programs shipped with M-Series machines gave as much as 176k of upper memory on 286 machines, allowing some device drivers and many TSR programs to be loaded high in memory, making main memory available to the user. DOS 5 gave upper memory to any PC user ; as long as they had a 386 or better. RM, recognising that not everyone can just bin their older machines released their own Upper Memory Block server (RMUMB.SYS) which offers the same amount of upper memory but works with the DOS devicehigh and loadhigh commands. It also gives better results on a 386 than un-optimised EMM386 (Microsoft's UMB server)

DOS 6 adds disc compression (worth having if you are running short of disc space), better memory management and the collection of utilities which Stephen describes above.

It still doesn't handle memory management as well as RMUMB (without "tweaking", MEMMAKER fails to find a 64k block of available upper memory)

I've been running DOS 6 for about 6 weeks now. It seems fine on my standalone but is not going anywhere near my network. If you do have hard drives on network machines and you want to compress them then use Stacker; it works well and is easy to install on Net LM (copy the Stacker files to the appropriate directories on Drive O: and create a special CONFIG.SYS for the station. Remember that you need to buy a separate copy of Stacker for each station.)

The way in which RM have designed the boot service for Net LM allows them to support multiple versions of DOS so I'm sure that DOS 6 will come but I don't think it's something that most network managers need for a while yet; I've not had any problems with it but DOS 5 seems to work perfectly well (unlike Windows 3.0) so, as the saying goes, "If it ain't broke, don't fix it!"

© RM User Group 1993

Modems and Communications

Steve Rochford

While computers have become much more accessible over the past few years, modems and everything to do with them seem to be part of an area which has unnecessary confusion associated with it. In this article I hope to give an introduction to the way in which a modem can be used and the reason you might want to use one.

First of all, what is a modem? It's a small box of electronics which allows you to connect a computer to the telephone lines. It takes the kind of signals which a computer puts out (digital; the signal is either on or off) and translates them into a series of tones which you can hear (high pitched to represent on and lower pitched for off). This is necessary because you can't send digital signals down a standard telephone line. Modems come in all sorts ranging from very cheap to very expensive. I've recently got a modem for school; the US Robotics Sportster 14400 (available for £256 from Computers by Post, 081 760 0014). It's very fast and BABT approved. (BABT is the board which approves any device which you might plug into a telephone socket. If a device does not have a green approval sticker then it is illegal to plug it in. It might work perfectly well but if anything does go wrong then you are breaking the law and would not be treated kindly!) The one I used to use is an Amstrad SM2400 which is available for about £100 if you shop around. It's not very fast but it's OK for getting started and it's also BABT approved Apart from approval, the other important thing to look for is Hayes compatibility. Hayes modems obey a set of commands which has become a standard and almost all modern modems are compatible. Exceptions are the early Tandata and Dacom modems which are in a lot of schools from a DTI funded project from about 7 years ago.

Apart from a modem you need a lead to connect it to the computer (this is straightforward if you are using an X, M or S Series Nimbus as they have standard serial ports; 9 pin on the X and S and 25 pin on the M series and available from RM if you have a PC186) and some software. If you are running Windows then the Terminal program which comes with it is enough to get started.

Lets assume that you have got a modem and set it up and you now want to do something with it. The obvious place to start is RM's own bulletin board. (A bulletin board is essentially an electronic messaging system; most of them allow you to send messages to other people, either privately or publicly. The latter is normally used when you are asking for help or offering advice so that anyone can read and respond to your message. Many bulletin boards are free to access; RM's is no exception) Plug everything together, switch on the modem, load Windows and Terminal and go to the Settings Communications menu. Check that the baud rate is correct for your modem (the Amstrad works at 2400; the Sportster at 14400) and that you have set 8 data bits, 1 stop bit, no parity and no flow control. In the Settings Phone number, enter the number 0235826283 and then click on Phone Dial. If all is well, you will

© RM User Group 1993

hear the modem start dialling and see lights flashing. After a short time you will see the Connect 2400 (or other number as appropriate) message which tells you that the remote board has answered and then the RM logon screen will appear. You are asked for your name; type it in. The system will tell you that it cannot find your name and then ask you to register. Fill in the questions you are asked and then you will get to the main menu.

RM's board, in common with most others, has various areas including a Message area, a Files area and other information sections. Choosing the message area takes you to the most useful section where you can read messages which other users have left and, if you want, leave your own messages. The RM board splits messages into various sections and you can choose to read any section in any order. It will remember which messages you have read so that when you next log on you can simply ask to read new messages and you will see the messages which have been left since you last looked. One of the things which often confuses new users is that the messages seem to be almost randomly ordered. They're not; you see them in chronological order which is not necessarily sensible (suppose someone leaves a message about Word and then another about Excel. Another user replies to the Excel message and then someone else replies to the Word message. You will read two Excel messages before you get to the Word answer.) You can choose to read in "Thread" order which means that you see a complete thread of messages and they start to make more sense! If you read the messages in this order then you will see a note on screen when you get to the end of a thread. This is probably the best point to add your own comments (if you do it earlier then you may say something which someone else has said but you have not yet read). Do add comments if you can offer advice or even if you just want to ask another question; this is what bulletin boards are all about. Don't spend too long thinking about what to write; one way to avoid large bills is to capture all the messages and then log off and read them. In Terminal you can do this by using Transfers Receive text file.

Finally, when you are ready to leave, make sure that you choose the Goodbye option. This makes sure that you log cleanly off the board and don't leave the system in a state where it can't be used by another user.

RM's board has 4 telephone lines (all accessible from the same number) If you have used the board before then you should note that the number has recently changed and you should use the new number shown above from now on. It can cope with very fast modems (up to 14,400 baud) and, because it has a lot of information on topics relevant to RM Users is well worth calling.

(An aside; the baud rate of a modem measures the speed at which data is transmitted. 2400 baud means that 240 characters per second are sent down the phone line. I can't quite read at this speed but it is too slow if you are wanting to capture a lot of information; eg if you want to download a file from a bulletin board then a 100kb file will take about 7 minutes to download in ideal circumstances. Although RM don't

© RM User Group 1993

charge for their bulletin board, British Telecom charge for your phone call and you need to be aware of the fact that the phone bill is ticking up all the time!)

The other type of service accessible with a modem is the big conferencing system of which CIX and Compuserve are examples. CIX has to be paid for and the amount you pay depends on where you call from and what conferences you access (most of them are free other than normal connect charges but I think there are some that you pay for). The advantage of services like these is that they contain enormous amounts of information. RM's board contains about 20 different message areas; the Windows area of CIX probably contains that many and it is just one of thousands of areas (many of which are not computer related; I started downloading a list of conferences sometime ago. It gave me a file more than 140kb long and is incomplete) I log on to CIX 2-3 times a week and use it for e-mail and for reading some of the conferences (at the moment I'm trying to learn Access and it's very useful to read other people's experiences on here).

If you want to try out CIX then you can dial in on 081 390-1255 if you are near London (voice phone CIX on 081 390 8846 for more information on numbers; there is local access from other parts of the country to save making long distance phone calls.) Almost immediately the phone will be answered and you will see the following:

```
Annex Command Line
Interpreter   *   Copyright
1991 Xylogics, Inc.
Type 'cix' at the 'login'
prompt to get started.
Port 27, Daffy.
login: CIX
UNIX System V Release 3.2.0
i386
gonzales
Copyright (c) 1984 AT&T
All Rights Reserved
Last login successfully
completed at Sat Jun 12
17:08:05 1993

CIX  Version  2.2   29/04/93
Copyright (c) CoSy Conferencing
System, University of Guelph,
1984
Portions copyright (c) Compulink
Information eXchange Ltd, 1985-
1993
You are on line: AH/ABHr
Nickname? (Enter 'new' for new
user)
```

At this point you should enter **NEW** as the Nickname (CIX's "short" name for users) and then follow the instructions. You can register on line and you will need to give a credit card number for billing. (If you use the system reasonably and don't dial in during peak hours then the bill does not get massive; you are charged about 4p per minute off peak with a a minimum charge of £6.25 + VAT per month)

Eventually you will get to the point where you can do something; the Main: prompt appears. Typing Help at any prompt will always tell you what you can do next; sometimes the help is not over-helpful but it will normally point you in the right direction. What you want to do at this point is to join a conference; type **JOIN LEARN** to join the learning CIX conference or join any other conference. To find a list of conference

© RM User Group 1993

names, type **SHOW ALL** but be warned that the list is very long; if you are using Terminal then make sure you are receiving a Text file so that you can read all of this later. It's more useful to type **SHOW ALL <text>** where <text> is something in which you are interested; for example, SHOW ALL PC will show all topics which mention PC in their name or description.

One of the conferences I join from time to time is Word for Windows (type JOIN W4W); it has several sections which discuss a whole range of things, including recently a big diversion into the merits of otherwise of Winfax. One of the odder things I found in the Bugs topic was a comment on the grammar checker. Type the sentence *You only get two reviews.* and include the full stop at the end. Now run the grammar checker. (In case you don't have Word, the program asks if two reviews should be replaced by rigor mortis. If you ask for an explanation it says you might have mis-spelled a foreign word and warns you to user foreign terms sparingly!)

From there it's really up to you to explore. When you join CIX you get a manual which takes you through the major areas of use in the system; I tend to keep it by me in case I get stuck whenever I try something new. If you want to download a file from the system then you can use Terminal in Binary file mode; it uses a *protocol* known as XModem which is a way of making sure that the information received by your computer is the same as that sent by the CIX computer. XMODEM is not very fast (it sends only 128 bytes at a time and won't send the next block until the previous one is acknowledged) and so CIX supports other protocols such as ZMODEM which are much better; you need special software to do this, however. I've been trying out WINQVT (which is really intended as a terminal emulator for connection to a DEC VAX computer). It does the job but as it's not really designed for it it's not very good. If you really get into using systems like CIX then you need to buy an *Off Line Reader* program. This is designed to log onto the system, automatically capture the messages which you have previously marked as interesting and copy them to your computer. It then logs off and you read the messages from your computer (so that you are not paying connect charges or phone bills). You can add replies etc. off line and then you log back on and the system will automatically send your replies. An OLR which seems to be rated very highly is WigWam but I've not yet tried it so I can't comment.

 © RM User Group 1993

The Anglo-Saxons

Steve Rochford

The Anglo-Saxons is the first CD-ROM product from Research Machines. It has been developed in conjunction with the British Museum and contains a wealth of information about Saxon times. I first saw it about two months ago and thought it looked interesting but didn't have much time to explore it in detail; recently I've been experimenting with it some more and I've really got to like it. It's also RM's first product which looks attractive in the delivered packaging; gone are the Jiffy bags and in comes a full colour plastic A4 sized case containing the disc and three books, a Teacher's Guide, a BBC book called *The Anglo-Saxons* (produced to go with the BBC Zigzag schools series) and *The Anglo-Saxons Activity Book* from the British Museum.

To use it you need a computer capable of running Windows in 256 colour mode or better; it'll work with standard VGA but the pictures look rather odd (and as there is a picture on almost every screen you would really be losing out). It is very easy to install and puts very few files onto your hard disc so it doesn't create lots of unnecessary clutter.

The program starts with a clear menu screen giving a number of choices such as Digging up London, Kings and Kingdoms and Making Books. There are also some large buttons at the bottom of the screen which give help or let you search for a key word. Throughout the package the screen has lots of "hyper" links; areas of the screen which, when clicked on, give more information or show you new pictures. For example, the starting screen shows a map of England and Wales with what looks like a snake curled up into a brooch. Clicking on this pops up a box asking if you want to find out more about Sutton Hoo (the picture is of a belt buckle found there). You can always tell if clicking on something is worthwhile simply by moving the mouse around the screen; the pointer changes shape when something is going to happen. I'll say more later about how the package can be used in subject areas other than History but this consistency of approach makes the program excellent for simply familiarising children with hyper-text type programs. Once you start moving through the screens new buttons appear at the bottom; a hare to take you back to the previous screen and a stag and hounds "to leap back to the beginning", making it easy to re-trace your steps if necessary or to go right back to the start if you are lost.

At almost any time when there is text on the screen you can highlight it and then click the copy button. This copies the text into a workbook which you can subsequently edit (it also puts it into the Windows clipboard so you can also paste it from there into, for example, Windows Write). The only time that I found I couldn't copy text was when I had clicked on a button to get, for example, further explanation of something; this was annoying because I wanted to copy these explanations on a couple of occasions but, because it is a Windows program, you can at least have Write at the front and simply copy the text by hand. You can't copy the pictures

 © *RM User Group 1993*

in the same way but you can use the standard Windows method of pressing PrintScreen to copy to the clipboard and then pasting into Paintbrush (this is fully explained in the book in the section on Art). If you are adventurous you can also load the pictures directly from the CD-ROM; they are stored as standard Windows bitmaps so they can be read directly into Paintbrush.

I should own up that I never found History very interesting when I was at school; all we ever seemed to do was learn the names of kings and politicians and details of the wars which they fought; but I am interested in how people lived. This disc allows you to find out all sorts of things about ordinary people. I spent ages just browsing through the disc. When you first look at it seems as if there isn't much there but because of the way the system branches you just keep finding more and more information.

There are some clever uses of "hidden" text in the pack. When you are looking at the section on riddles, some of them are shown in the Old English form but clicking on a word at a time "translates" them into modern English. This allows pupils to get a feel for how the words have changed (some are quite obvious, others less so). The answers to all the riddles are also given, together with an explanation of how the answers are arrived at.

When I first mentioned the pack to the Historians at school they said that it might be interesting but it wasn't really any use to a secondary school; the Saxon period was really dealt with at an earlier age. When you get the pack this is obviously true but the beauty of the pack is that it shows you how the disc can be used not just for primary History but for other subjects at Key Stages 1-4; for example, the Old English form mentioned with the riddles above fit into Key Stage 4, AT2 at level 8 where pupils are asked to be *aware of the changes in the grammar of English over time.* The Teacher' Guide contains examples of how the material can be used in History, Art, English, Geography and Technology at all 4 Key Stages. There are also a number of suggestions for cross-curricular themes such as equal opportunities and environmental education.

I was very impressed with the disc. I'm not sure how many primary schools have access to CD ROM drives but as the price of drives continues to fall I'm sure that more will get them and the availability of high quality teaching material to use makes the acquisition of a drive justifiable. The disc costs £89 for standalone use or £199 for network use which, while not cheap, is not outrageous.

 © RM User Group 1993

RM User Group Training Weekend 22-24 October 1993
Novotel Stevenage

This year we are returning to the Novotel in Stevenage, venue for last year's successful weekend. Preparations for the Weekend are now underway. At the moment the courses available include:

- ✯ Word for Windows
- ✯ Excel
- ✯ Access- the database from Microsoft which should be shipping with RM Networks by the time the weekend takes place. (This is a high-end product but is very easy to use)
- ✯ RM Investigate (Data Logging for Science) and Control software and hardware
- ✯ Professional Development
- ✯ Getting Started with your computer - particularly using the Window Box applications
- ✯ Looking after a standalone computer -using DOS and Windows
- ✯ Network Management with Net 3.1A particularly for a mixed network - PC186 to PC486
- ✯ Network Management with RMNetLM - making the most of your server
- ✯ Multi-Media
- ✯ Desktop Publishing - learn how to put together information from a variety of sources to produce simple newsletters or a magazine like RM User
- ✯ "Agony Aunt" sessions; a chance to talk to RM staff and experienced members of the User Group about any problems you may be having (preferably with your computer!)

More details will be sent to you shortly but if you want to reserve a place now then send a cheque for £25 made payable to RMUG to:

Training Weekend
RMUG
FREEPOST
London
W12 0BR

 © RM User Group 1993

Hints and Tips

What to do when it all goes wrong

All sorts of things can and do go wrong with computers, most of them are really trivial but the first time the machine won't do what you're expecting it to do can be quite offputting. What follows are some general notes about a few things that may happen and how you recover from them as well as some ideas about how to prevent disaster in the first place.

I use Windows all the time and generally it's pretty stable (Windows 3.1 is much more stable than 3.0; if you've not upgraded yet then it really is worthwhile) but from time to time my computer just locks up and just sits there with an egg timer. If the mouse will still move the pointer then the computer hasn't totally failed so try pressing CTRL ESC. This should bring up Task Manager which shows which programs are running. If this happens then you know that Windows is still runnning properly and, probably, the program you were using is also OK but is just taking a long time. (If the program had crashed then it's quite likely that you wouldn't get Task Manager because a dead program tends not to co-operate with Windows in the way that's necessary to pass on keyboard messages). If nothing happens then it may mean that the program is just taking a long time (but 5 minutes is a very long time for a computer) so you may have to take more drastic action. If you haven't recently saved the work you were doing then unfortunately you are going to lose it. Provided that no disc light is on then you can fairly safely switch off the computer and then switch it back on again. If you can restart Windows and your application then you just have to assume it was one of those odd things that happen sometimes (if you can't restart the machine then this is the time to call Customer Support!) If you do have to re-star the computer like this then you should quit Windows when you are sure that it works and do two things. First of all type `CHKDSK C: /F` and press enter. Chkdsk tries to make sure that the information stored in the directory and File Allocation Table makes sense; if it does then you just get a set of statistics at the end, otherwise you may get messages about lost clusters. Answer Y to the question and wait for Chkdsk to finish. If you type `DIR C:\` then you will see one or more files names something like FILE0000.CHK. You can almost certainly delete these (the only time you would not delete them was if you really needed to recover some data that had been lost and you felt confident with something like Debug; this is not for most people). The next thing to do is to look in your temporary directory. Type `SET` and look at the list for a line which says something like `TEMP=C:\TEMP` or `TEMP=C:\WINDOWS\TEMP`. Change to the directory shown (ie `CD C:\WINDOWS\TEMP` or `CD C:\TEMP`) and delete any files there which end with TMP (type `DEL *.TMP`). TMP files are temporary files created by many Windows applications while they are running and normally deleted when the program finishes. If you switch the computer off then they are not deleted and clutter up your hard disc.

© RM User Group 1993

Another common problem is that a printer that has been working perfectly happily suddenly stops; a common sympton is that you click on File Print OK and the printing message appears briefly and then vanishes. I've had this happen with several different printers and in all cases the problem is solved by closing down tidily and then re-starting the computer. I think that it happens when Windows is running short of memory and re-starting everything just tidies up the memory.

Some applications do make it harder for you to lose work by automatically saving your work for you at intervals. Word for Windows does this (use Tools Options Save Automatic save every 5 minutes) as does Corel Draw (on installation it creates an Autobackup directory and saves every 10 minutes). If you are using a program which doesn't automatically save then you should remember to save your work regularly. It's also no bad idea to save two copies of the file then if one does get damaged somehow then you can quickly recover the other one.

Backing up is one of those things that often seems more difficult than it is. If you have a reasonably sensible directory structure. I have a directory called work on my hard disc and this is then split up into sub-directories called things like magazine, RMUG, personal and so on. Every version of DOS has come with a backup program which while not fast or exciting certainly works. To use it quit from Windows and get to the C:\ prompt. Make sure that you have a stack of formatted discs handy and then type BACKUP C:\WORK*.* / S A: and then follow the instructions. (You are telling the program to take all the files in WORK and the sub-directories below and copy them to discs in A). If you ever need to restore a single file then you type: `RESTORE A: C:\WORK\RMUSER82.PM4` (replacing my filename with the full name of the file you want!) How often you backup depends on how much work you do and how important it is.

Other things to check for if the computer doesn't work when you first switch it on are that all the leads are plugged in tightly; any error message you get is not necessarily very helpful. I recently had a message (not from a Nimbus) about a memory failure. It turned out that the keyboard had a bent pin on its plug! I've also had a problem with a computer failing to boot just because the mouse wasn't plugged in and printer leads coming loose can also cause problems. If your colour monitor suddenly becomes black and white then make sure that the lead is in tightly; the system tries to find out what sort of monitor is there when it is switched on. If it can't then it assumes a black and white monitor and only re-starting the computer will persuade it otherwise.

Using Hiload with Mouse.sys

If you are using Net 3 or 3.1 then you may well have taken advantage of the fact that mouse.sys can be loaded high by putting it in the MSNET.INI file. When you upgrade to Net 3.1A to support S Series machines you can no longer do this because they use a different mouse driver (lmouse.sys). All is not lost, however. It's possible to load the mouse driver in just the batch files which need it; this will only be

 © *RM User Group 1993*

standard IBM applications because Windows has its own mouse driver as do RM mode applications. I can't give exact details here (because I don't have any S-Series machines) but essentially you are using CHKMODE as normal to find out what kind of machine you have. If the machine is an S-Series then you include the line

```
HILOAD /V /Q Q:\LMOUSE.SYS
```

and if it's an M or X-Series then you use the line

```
HILOAD /V /Q Q:\MOUSE.SYS
```

(/V tells hiload to load the program as a device driver, /Q uses Quiet mode so that no error messages are shown on screen if there is insufficient high memory. This doesn't matter; the mouse driver is simply loaded low).

Lanspool

Lanspool seems much simpler to use than Spool+ but with one exception; the DeskJet 500 printer. This printer is, unfortunately, not supported for network use by Hewlett Packard but did work perfectly well with Net 3 and with Spool + so I was determined to get it to work with Lanspool. You may not want to use this printer but if you have another printer which seems to be going slowly then read on. Lanspool can use one of two modes for controlling the printer; interrupt driven and polled. Intel recommend the former, RM the latter. The reason for this is that interrupt driven mode is almost always faster and puts less demand on the computer because the printer interrupts the computer when it needs more data; for the rest of the time the computer carries on doing its normal work. With polled mode the computer pauses many times a second to see if the printer needs more data. Normally it doesn't so a lot of time is wasted. RM recommend polled mode because the interrupt structure on a Nimbus is totally changed whenever you swap from IBM to RM mode and back again, causing print jobs to be lost (at best) or the machine to crash (normally). For most printers using polled mode is fine but for some reason the DeskJet prints far too slowly (the status program shows that the computer is sending about 1 byte per second instead of several hundred!). Intel supply a program to alter the rate at which polling takes place to cope with just such a situation but I couldn't get it to work (not least because the syntax shown in the manual is wrong!) but eventually Intel customer support suggested using SET LS_POLLED=10000 and this has solved the problem. (Use Station Manager to set an environment variable for the station which has the printer connected) The value can go up to 65535; the default is 50. The bigger the number is, the more frequently the station will check to see if the printer needs more data. 10000 seems to be a reasonable compromise. My next problem with the DeskJet is getting the printer driver to believe I have a colour printer (the 500C) connected to one station rather than the 500. I know HP didn't design the DeskJet for network use but it really seems as if they went out of there way to make it hard to use!

© RM User Group 1993

Shop Talk

David Palmer

I have a very vivid memory of a documentary about the training of policehorses where they had a crowd of people waving flags, shouting, letting off fireworks, twirling rattles and doing all they could to make the horse bolt. I feel very like that horse at the moment with people waving new software, new hardware, National Curriculum (sorry), reports, INSET, teaching and network maintenance in my face. I don't think I am handling it with the same aplomb as the horse either.

No Lego kit yet!

Some heros for this month:- Headmax is an intelligent head cleaner which keeps a record of what part of the cleaning medium has been used, how well your heads are reading, how they are aligned and how fast the drive is - all for £14. Call Misco on 0933 400400.

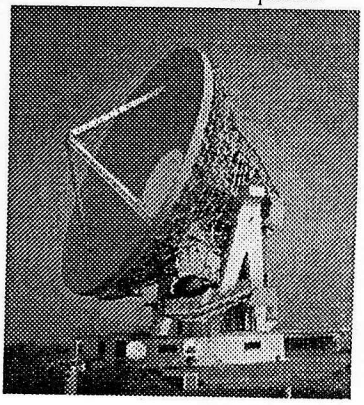
Zillion and Crystal Rain Forest have joined Space Mission Mada in a group of programs from Sherston that must be the most used programs on our network. They are both very good and CRF has super graphics and animations.

I had a funny experience installing Zillion. I used Applications Manager and it produced a 21 line MTSL script. When the program ran it reached a certain point and quit with a "bad directory" message. I looked at the listing and it wanted a subdirectory called *planets*. I put this into the script along with the other directories that were there and saved it. Tried again, no joy. Eventually I ended up with a tiny script that said

```
Set Path=P:\lib\zillion;%path%
cd p:\lib\zillion
execmin pc186.com p:go.bat
cd p:\
```

Now go.bat is the batch file to run on Net3 and I edited that to include p:\lib\zillion instead of p:\zillion and it all worked fine!! (Note that in order to run a batch file the user must be a member of the grouo DOSUSERS; I have a user identity which allows multiple logon and belongs to DOSUSERS for this purpose.)

Villain of the month was the gentleman on the Microwriter Services helpline. I called because the interface, which I had used hundreds of times to upload files from my Agenda to the network, stalled. "It's the mouse driver", he said, "It won't work with the mouse driver". I said I had done it many times and he said "No, you couldn't have, it won't work." Now I know what I have done and (unlike a police horse) I don't cope very well with people who contradict me like that! There goes the blood pressure again. Similar stories to Steve or me please.



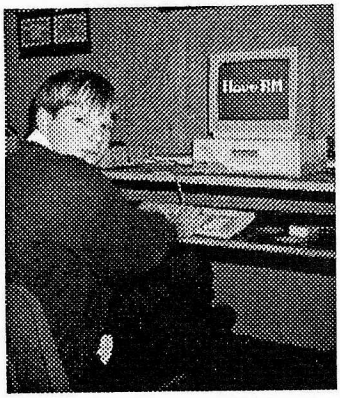
© *RM User Group 1993*

Improving your image?

Mark Burch

I expect you have zillions of clip-art files but do you sometimes find you don't have exactly the picture you want? If you're doing a cover for a school magazine you want a picture of *your* school not an anonymous school. If it's an article about RM you want a picture of a Nimbus, not any old computer. Until recently the two main ways of getting pictures into a computer have been to use a scanner or a video digitizer. Now there's an exciting new way: Photo CD. If I sound keen it's because, compared with installing the umpteenth minor upgrade to Net LM, Photo CD is great fun.

Photo CD is simple and cheap. Well relatively simple and relatively cheap! The idea is that you take some photos with an ordinary camera. Instead of getting your film turned into prints for your album you ask the photo lab to put the pictures onto a CD for you. You put the CD into your CD-ROM drive and your photos appear on the screen in glorious hi-res technicolour.



Any 35mm camera will do the job. Mine cost £9.99 in Dixons. I expect I'd get better results with a more expensive camera but I'd worry about losing it and I'd be afraid to let children use it.

Having your film put onto CD is a little more expensive than having prints made. If you live in a big city it's worth shopping around. If you live in a rural area you'll be lucky to find more than one photo shop that offers this service. FotoFast in Truro will put a 24-exposure film onto a CD for £8.79 and if you need to buy the blank CD from them that is an extra £4.99. A CD will hold about 100 photos so you can put several films onto each CD. Each time you have a film put onto a CD they print a set of thumbnail prints which slips neatly into the CD case and makes it easy to remember what is on the CD. Photo CD has been developed by Kodak. You may have seen it mentioned briefly in their TV adverts. Kodak sell devices that let you view your photos on a TV, for those who don't have computers.

You'll see this a lot on a slower computer!

Don't assume that any old CD-ROM drive will deliver your photos onto your screen. Life isn't like that! You need to check that your drive is Photo CD compatible. Some drives will read the first film put on the CD but not subsequent ones, so check that yours is "multi-session". The best-selling Mitsumi LU005, which I've seen advertised for as little as £149, works fine. RM's Sales Desk tell me that the drives they are

© *RM User Group 1993*

currently supplying are Photo CD compatible.

What about software? You may already have all the software you need. Several graphics programs, including Corel Draw (version 3.0B and above), can handle the Photo CD format. Alternatively you can buy Kodak's Access software. The price of this varies widely. Octree Computers are advertising it for only £15 in July's PCW. The Access software comes with 24 impressive sample photos. It lets you view your own photos in 16 or 256 colours or in 24-bit colour (provided your graphics card and monitor are suitable) and in a range of sizes. I don't know whether the printed images that accompany this article will do justice to the screen images. Take my word for it, even the 16-greys image is respectable and the 256 colour image would not look out of place in a glossy Sunday supplement. It's cool! Access will convert to .bmp format so that you can take your pictures into Paintbrush. In fact it'll convert to eps, pcx, tif and more. It can also crop pictures which is useful if your photography is as amateurish as mine.

We're talking BIG files here; 1-2Mb is not unusual. Think in terms of a 486 with between 4 and 30Mb RAM and a decent hard disk running Windows in enhanced mode. Of course, once you've created a .bmp file you can use that on any old 286 in Paintbrush, Word or whatever. You can make a monochrome image that will display on a 186 but the results are miserable. Don't bother.

That's the technology. What have I used it for? First I had lots of fun taking photos of pupils and playing around with them. The results generated a lot of interest. I like to make the point that photographic images can never be trusted because it is so simple to edit them. It has been alleged that during the Gulf War a photo of Saddam Hussein was edited to make his moustache look like Hitler's. Whether true or not, any PC owner is now capable of such image-manipulation.

When producing a worksheet on 3-D shapes I wanted a picture of a Toblerone box to illustrate the idea of a prism. Even the giant resources of Compuserve failed me, so I took a photo myself and it was simple to incorporate into my Word document. Now I'm preparing a new technology course and I need some pictures of computer parts so I've done the same. With a decent printer it is easy to put the photos onto overhead projector transparencies. The possibilities for using with pupils and for lesson preparation are endless.

© *RM User Group 1993*

Memorandum

To: Mrs D Penfold

From: DP Department

Subject: Replacement of Mouse Balls

Date: 1/4/93

Mouse Balls are now available as FRUs (Field Replacement Units). If a mouse fials to operate or should it perform erratically then it may need a ball replacement. Because of the delicate nature of this procedure, replacement should only be attempted by properly trained staff.

Before proceeding, determine the type of mouse balls by examining the underside of the mouse. Domestic balls will be larger and harder than foreign balls. Ball removal procedures differ depending on the manufacturing origin of the mouse. Foreign balls can be replaced using the pop-off method. Domestic balls are replaced using the twist-off method. Mouse balls are not usually static sensitive but excessive handling can result in a sudden discharge. Upon completion of ball replacement the mouse may be used immediately.

It is recommended that each department has a pair of spare domestic and foreign balls in order ot maintain optimum user satisfaction. Any user with no balls should suspect local staff of removing them.

To re-order, please specify one of the following:

Foreign balls: PN 033-462

Domestic balls: PN 033-486

Message of the day on Unix system.

/bin/usr/demo/earth 98% full - can we delete anyone?

 © *RM User Group 1993*

Your Magazine

Many thanks to all those of you who have written articles for the magazine in the past but now it's time to re-emphasise that without you there is no magazine. I quite enjoy putting the magazine together and I'm always happy to take anything you send me and polish it up if you think that it's not quite good enough for publication but if I don't get any articles then you don't get a magazine!

I really do welcome items for the magazine from anyone. You don't have to be a great writer to send something in; send a letter or a short tip for the Hints and Tips pages, everything is welcome. If you want to phone and talk something over then please do; even if you aren't sure how to write something down then I can always include your ideas in Hints and Tips or as a plea for help.

I would be particularly pleased to hear from the people who are using RM computers at home; there are quite a lot of you out there. Some of you will be experienced at working with computers and I would be interested to know why you chose RM for home use. Others will have responded to RM's advertising, perhaps because your children use the same computers at school. How are you getting on with your new machine? Did you have any problems getting started? It doesn't matter if you still don't know the answer to the problem-this is how you'll find out - and it doesn't matter if you think that your problem was trivial; remember that there are many other people who are going to be in exactly the same position as you and will welcome the help that you can give.

If you are writing for me then the ideal is to send me a disc produced using Word or Word for Windows but I can cope with any word processor that runs on a Nimbus (I think). If what you are sending is short then a letter on good old fashioned paper is fine.

Finally, we pay for published articles at the rate of £5 per printed page (although all payments are at the Editor's discretion).

Advertising in the Magazine

Full and half page advertisements can be placed in the magazine and details can be obtained from the Advertising Manager. We also take classified ads and members may place free ads for surplus equipment in MicroMart.

Rates

Back Cover **£100** Inside Cover **£60** Full Page **£50** Half Page **£30**

Classified **£5/100 words**

These rates assume black-on-white, camera ready copy. Please avoid dot-matrix output. Typesetting is charged at cost and is additional to the above rates. Classified ads must be pre-paid; cheques payable to *RM User Group*

 © RM User Group 1993

Membership Form

Please use capitals

Mr/Mrs/Miss/Ms .....

Job title (if appropriate) .....

Address .....

.....

.....

Postcode .....

I enclose a cheque payable to RMUG/order for £15 (£20 for overseas members). If you are not enclosing a cheque then please send an official order, indicating clearly to whom the invoice should be sent.

In order to serve our members better we like to know something about them and what they do with their computers. The information you give is confidential and we are registered as Data Users under the Data Protection Act.

Are your computers mainly: ☐ standalone ☐ networked

Please tick the areas in which you are interested.

☐ Word processing	☐ Spreadsheets	☐ Databases	☐ Programming
☐ Education	☐ DTP	☐ Art/Graphics	
☐ Administration	☐ CAL	☐ CDT	☐ Communications
☐ Windows	☐ Other	☐	☐

Please tick the best description of yourself or your institution

☐ Sole Trader	☐ Limited Co.	☐ Primary School	☐ Charity
☐ Middle School	☐ Secondary Sch	☐ 6th Form College	☐ FE College
☐ HE College	☐ Personal User	☐ University	☐ R&D
☐ Ind. School	☐ Computer Centre	☐ Other	

Please send your form and payment to:

RMUG, FREEPOST, London W12 0BR

You may photocopy this form if you do not wish to cut your magazine.

 © RM User Group 1993

Committee Members 1993/1994

Chairman Ian Burgess	5 Polsted Road Catford London SE6 4YH ..... 081-690 5427 St Dunstan's College Stanstead Road Catford London SE6 4TY 081-690 1274
Vice-Chairman Phillip Fox	73 Parker Rd Horbury Wakefield West YorkshireWF4 5JR 0924 273933
Secretary John Williams	Aston Drey 38 Marsh Road Wilmcote Stratford-Upon-Avon Warwickshire CV37 9XR ..... 0789-269533 Stratford-upon-Avon College, The Willows North, Stratford-Upon-Avon, Warwickshire CV37 9QR 0789-266245
Treasurer Helen Williams	Aston Drey 38 Marsh Road ..... 0789-269533 (as above)
Membership Secretary Maureen Wernham	RMUG, FREEPOST, London, W12 0BR *or* 40 Manor Drive Hinchley Wood Esher Surrey KT10 0AX
Editor Steve Rochford	46 Ollgar Close Shepherd's Bush London W12 0NG ..... 081-740 5642 Latymer Upper School King Street London W6 9LR 081-741 1851
Software Librarian Glenn Taylor	Mr G A A Taylor 1 Frayne Road, Ashton, Bristol, BS3 1RU 0272 635816
Advertising Manager Myfanwy Wallace	8 Cornwall Road Cheam Sutton Surrey SM2 6DR 081 661 6408
Mary Mabey	Bacons' College, Timber Pond Road, .. 071 237 1928(S) Rotherhithe, London SE16 1AG ..... 081 6987573(H)
David Palmer	Ackworth School, Pontefract, West Yorkshire 0977 615225
Stephen Sharrad	10 Gainsborough Hill, Henley-on-Thames Oxfordshire, RG9 1ST 0491 577149
Geoff Strack	36 Carrington Avenue,Borehamwood Hertfordshire WD6 2HA
Peter Wallace	King's School, Satis House, ... 0634 84391(S) Boley Hill Rochester Kent ME1 1TE ... 0634 811099(H)
Keith Whiddon	6 Hill Mead Horsham West Sussex RH12 2PU

Quality Maintenance

NATIONWIDE MAINTENANCE OF MICRO COMPUTERS
AND THEIR ASSOCIATED PERIPHERALS.

Micro Computers

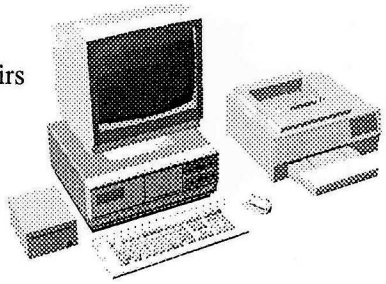
APRICOT
ARCHE*
AST
COMPAQ
ELONEX
HERMES
IBM
KYOCERA*
OLIVETTI
OPUS
PERTEC
RESEARCH MACHINES*
REXON
SIRIUS
TANDON*
WALTERS
WYSE
ZENITH

Printers

BROTHER
CANON
CITIZEN*
EPSON
FUJITSU*
HEWLETT PACKARD
KYOCERA*
MANNESMANN TALLY
MICROLINE
NEC*
OKI
OTC*
PANASONIC*
RICOH*
SEIKOSHA*
STAR
TOSHIBA

* warranty arrangements

* Nationwide Coverage
* On-Site and Return to Depot Repairs
* Qualified Engineers
* 8 Service Centres
* Selection of Response Times
* 53 Manufacturers Supported - (micro PCs and peripherals)



A TEAM TO BE TRUSTED

Call our Sales Dept for further details:

MSM Micro System Maintenance Ltd

Telephone: (0793) 616888
Fax: (0793) 618507